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DISCUSSION

Dr Cynthia K. Shortell (*Durham, NC*). Congratulations to the authors on this excellent paper about a challenging clinical and technical problem; namely critical limb ischemia due to tibial disease in patients who are poor surgical risk.

As vascular surgeons, we are increasingly called upon to achieve limb salvage in more and more difficult situations, be it unfavorable patient anatomy, patient physiology, or patient physique, and we need ever-greater numbers of tools in our toolbox in order

to accomplish this. This paper describes the Ochsner group's experience with just such a tool; namely, retrograde pedal access for patients with tibial artery occlusive disease. While this technique has been described previously, midterm results have not been reported previously. The authors describe the use of this technique in patients in whom a standard antegrade approach had been tried and had failed, and report favorable technical and clinical success rates.

I thoroughly enjoyed reading this well-written manuscript and appreciate receiving it from the authors well in advance of the meeting. I would also like to thank the authors for providing me with a copy of the manuscript in a very timely manner. I have several questions for the authors:

First, can you be more specific about the unsuitability for surgery? Were there medical comorbidities or patient-related issues such as obesity? How was this determined? Were there specific criteria or was it surgeon-specific?

Your manuscript suggests that all patients had an initial attempt at traditional antegrade access. Was this indeed the case, and if so, was the pedal access attempted at the same or a later setting?

In four patients, the procedure was technically unsuccessful. What happened to these patients?

You had a limb salvage rate of 77% at 17 months. Did you assess patency of the revascularization, and if so, what was it?

Given the results of this study will you change your practice to offer pedal access as the initial procedure in some cases now?

Dr Hernan Bazan. Thank you, Dr Shortell, for the nice summary and the very insightful questions. The first question you asked is about the unsuitability of the patients. We did not do any standardized risk stratification. Patient suitability was left to one of the three board-certified vascular surgeons who deemed whether or not the patient was a bypass candidate. Patient factors, such as ischemic cardiomyopathy with a severely depressed ejection fraction or dialysis-dependence with a poor functional status, are some examples. In terms of whether or not we brought the patients back for a retrograde pedal access during the initial angiogram, I can only recall one or two instances where the patient was brought back after a failed antegrade access. This does bring up another point, which we were discussing earlier: in these cases that involve a retrograde pedal access after a failed antegrade approach, what we have found is that after one attempt to revascularized via an antegrade approach for an hour or one hour and a half, the techs in the endovascular suite are then told "okay, let's prep the foot," and everybody in the endo suite has to be prepared to work an additional hour or so. Hence, it certainly does add more time, but I can recall one or two patients where they were brought back. These were primarily cases in which we were trying to avoid a large contrast exposure in patients with compromised renal function.

You also asked a question about the four patients we were not able to revascularized; there was major limb loss in three of them. The fourth patient had rest pain, and he subsequently underwent a successful revascularization through a pedal bypass. He was the only one out of the 13 that had a bypass, as none of the other patients were bypass candidates.

The last question you asked: Would this change our practice? I think, as it was mentioned earlier and mentioned on the first day of our conference, we always teach our trainees to individualize treatment to the patient. I believe we should optimize our attempt to do a tibial bypass when we can because it is a great operation, very durable, and to date, nothing else has similar long-term patency. Although we do in fact attempt an endovascular approach first in the majority of patients, there are some who are clearly good bypass candidates and no endoluminal attempt at revascularization is made; they go on to a tibial bypass.